produced, while the described embodiment does not involve any limiting condition of its scope.

CLAIMS

1) Fluid spinning system, for spinning all kinds of textile fibers, natural, artificial, and synthetic ones within a fluid medium under pressure, characterized in that it is composed of:

a) a closed conduction unit which contains a circulating fluid under pressure and textile fibers which are dragged by said fluid, fibers which are spun by the controlled manipulation of said fluid, wherein said conduction unit is equipped with

nozzles for injecting fluid, or fluid with textile fibers into the circulating stream, which passes through the external surface of said conduction unit in determined positions and orientations depending on the type and composi-

tion of the yarn to be produced, as well as on the operations to be carried out on said textile fibers in the interior of the conductions unit, having a means for said nozzles modifying the size of the diameter of the fluid clearance area through them, thereby causing a Venturi effect.

-some fixed and/or mobile mechanical elements situated in the interior of said conduction unit, with respect to quantity, form, placement and arrangement which all depend on the type of yarn to be produced, to modify the direction, clearance area and speed of the circulating stream and of the textile fibers transported by said fluid in a way that said fibers attain predetermined movements, and some output ports of the fabricated yarn from said textile fibers to the outside of the conduction unit for its recollection afterwards

b) some impulsion means of the circulating stream and of the fluid that goes into said conduction unit through said nozzles

c) programming means of the variables of the fluid system, which are among others, the parameters of the fluid such as the pressure, temperature, viscosity and flow speed, dimension of the diameter of the clearance area of the nozzles, configuration and arrangement of said mobile mechanical elements situated in the inner side of said conduction unit, as well as the parameter of another or any other different fluids that are introduced in the fluid system, and

d) control means of the variables of the fluid system wherein said system, due to the creation of some predetermined doubling, drawing, and twisting effects of said fibers within said closed conduction unit induced by simultaneous injection of fibers through several parallel nozzles, change in direction, pressure, temperature, viscosity and speed of said fluid, renders the fabrication of different yarns from textile fibers possible and at the same time makes it possible to give the fibers and/or the yarn specific treatments like dyeing, steaming, setting, and others whereby said treatments are carried out within the proper fluid system.

ABSTRACT

The invention relates to a system for spinning in a fluid medium, whereby fibres are transformed into yarns. According to the invention, fibres are introduced into said medium, moved about and transformed into yarn (spinning) by controlling and varying determined parameters of the fluid system and controlling the movement of the fibres to be spun. Moreover, in said fluid medium, the yarns can be subjected to a physical and/or chemical treatment of the type used in the textile sector, as the spinning is being performed.